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**Department of Energy**  
Richland Operations Office  
P.O. Box 550  
Richland, Washington 99352

SEP 02 2005

05-AMCP-0400

Mr. A. W. Conklin, Supervisor  
Air Emissions and Defense Waste Section  
Washington State Department of Health  
P.O. Box 47827  
Olympia, Washington 98504

Mr. D. Zhen  
Radiation and Indoor Air Section  
U.S. Environmental Protection Agency  
Region 10  
1200 Sixth Avenue  
Seattle, Washington 98101

Mr. O. S. Wang  
Nuclear Waste Program  
State of Washington  
Department of Ecology  
3100 Port of Benton Boulevard  
Richland, Washington 99354

**RECEIVED**  
SEP 20 2005  
**EDMC**

Addressees:

TRANSMITTAL OF RADIOACTIVE AIR EMISSIONS NOTICE OF CONSTRUCTION FOR  
DEACTIVATION OF THE PLUTONIUM FINISHING PLANT, DOE/RL-2003-43,  
REVISION 0A

The purpose of this letter is to submit a Notice of Construction (NOC) Application/Permit  
Revision for approval.

Enclosure 1 is a copy of the subject NOC Application/Permit Revision/AOP Off-Permit Change  
Notification form. This NOC application is being submitted to the Washington State Department  
of Health for approval pursuant to Washington Administrative Code 246-247-060 and to the U.S.  
Environmental Protection Agency Region 10 for information.

Enclosure 2 is a Notification of Off-Permit Change to incorporate the revised NOC for potential  
radioactive air emissions from deactivation activities into the Hanford Site Air Operating Permit  
(AOP). This information is being provided to the State of Washington Department of Ecology  
consistent with the role as lead for the Hanford Site AOP.


Addressees  
05-AMCP-0400

-2-

SEP 02 2005

If you have any questions, please contact me, or you may contact Craig Richins, of my staff, on (509) 372-3248.

Sincerely,



Matthew S. McCormick, Assistant Manager  
for the Central Plateau

AMCP:WCW

Enclosures

cc w/encls:

J. A. Bates, FHI  
R. W. Bloom, FHI  
G. Bohnce, NPT  
L. D. Crass, FHI  
L. J. Cusack, Ecology  
R. H. Engelmann, DFSH  
L. L. Fritz, FHI  
S. Harris, CTUIR  
D. W. Hendrickson, Ecology  
N. A. Homan, FHI  
M. T. Jansky, FHI  
R. Jim, YN  
T. M. Martin, HAB  
E. J. Murphy-Fitch, FHI  
K. Niles, ODOE  
R. W. Oldham, FHI  
K. A. Peterson, FHI  
J. W. Schmidt, WDOH

Administrative Record (files: Radioactive Air Emissions  
Notice of Construction for the Deactivation of the  
Plutonium Finishing Plant/WDOH NOC ID  
Number 608/AIR 04-1209)  
Environmental Portal

Enclosure 1

TRANSMITTAL OF NOC APPLICATION/PERMIT REVISION/AOP OFF-PERMIT  
CHANGE NOTIFICATION  
DOE/RL-2003-43, REVISION 0A

## NOC Application/Permit Revision/AOP Off-Permit Change Notification

NOTE: Any increase to abated or unabated PTE requires a full NOC modification

### REASON FOR CHANGE

Submittal Date: 8/25/05

Submittal Type: Other Submittal

☒ **NOC Application Revision**

New NOC Rev Number: DOE/RL-2003-43, Rev. 0A

Request for revision of approval conditions

☐ **Condition Change/ Clarification**

WDOH Condition Number: \_\_\_\_\_

AOP Condition Number: \_\_\_\_\_

☐ **ALARACT Revision**

New ALARACT Rev Number: \_\_\_\_\_

### PROJECT IDENTIFICATION

Project Title: Deactivation of the Plutonium Finishing Plant (PFP)

Current NOC Application Number: DOE/RL-2003-43, Rev. 0

AEI ID Number (AOP Emission Unit Number(s): 486

Current WDOH Approval Letter Number(s): AIR 04-1209

WDOH NOC ID Number: 608

### DESCRIPTION OF CHANGE

Number of Attachments 1

*WDOH will provide a new approval letter containing any new or modified conditions that result from the following proposed change.*

Proposed Change (provide original and proposed wording):

The existing NOC contains information regarding fugitive emissions associated with fuel de-inventory activities also described in currently approved condition and limitation # 32. For certain shipping containers, in order to properly prepare the container for shipment, the container must be evacuated and purged using a portable vacuum pump. The interior of the shipping container has potential removable contamination accounted for in the potential to emit (PTE) as approved for the current NOC application. The use of the portable vacuum pump represents a very minor forced flow addition to the fugitive emissions from the fuel loading activities that was accounted for in the conservative estimate of PTE in the NOC. This revision is provided because the vacuum purge activity was not explicitly described in the original application or explicitly described in either the portable temporary radioactive air emission unit (PTRAEU) or HEPA filtered vacuum NOCs.

### **FOR WDOH USE ONLY**

Data Entry Completed By: \_\_\_\_\_

Date: \_\_\_\_\_

The current approval condition # 37, item 7:

7. If a guzzler, PTRAEU, or HEPA filtered vacuum radioactive air emission unit is used, controls as described in the respective sitewide guzzler NOC, DOE/RL-96-75, or DOE/RL-97-50, as amended and licensed, would be followed.

The proposed change would be to add the following as supplemental to the NOC and as reflected in the NOC approval conditions:

*For purging activities, use of a stand alone vacuum pump fitted with a Nuc-Fil™ metal HEPA filter is allowed, with the control that the filter flow through the system is limited not to exceed the filter rating. Confirmatory measurement of low emissions will be based on radiological technician field survey of either the down stream side of the HEPA filter or at the outlet of the vacuum pump.*

Justification for Requested Revisions:

The change does not represent an increase in the estimated potential-to-emit, but describes a process change to manage a necessary effluent associated with preparing the container for shipment. Due to the low potential for emissions and the conservative estimate of PTE already approved for the fuel handling activities, no increase in estimated PTE from those activities is expected. In addition, with the purge vent filter controls being put in place, no increase in estimated actual emissions is anticipated.

Nuc-Fil™ metal HEPA filters have demonstrated consistent reliability in nuclear industry application. The filter will be installed upstream of the vacuum pump used for the purging. The total volume of gas displaced during the purge represents approximately 10 cubic feet. The purging requires repeated evacuation and backfill with inert gas. The PTE associated with the evolution is due to residual contamination ( $< 20,000$  dpm beta/gamma per  $100 \text{ cm}^2$ ) that may be present within the shipping container and is not dependent upon the number of purging cycles. Two shipments are anticipated with minimum three purging iterations each (additional purgings may be needed to achieve proper closure of the shipping container).

Enclosure 2

NOTICE OF OFF-PERMIT CHANGE FOR THE HANFORD SITE AIR OPERATING  
PERMIT (NUMBER 00-05-006) FOR REVISION 0A, RADIOACTIVE AIR EMISSIONS  
NOTICE OF CONSTRUCTION FOR DEACTIVATION OF THE PLUTONIUM FINISHING  
PLANT (PFP), DOE/RL-2003-43

## HANFORD SITE AIR OPERATING PERMIT

### Notification of Off-Permit Change

Permit Number: 00-05-006

This notification is provided to Washington State Department of Ecology, Washington State Department of Health, and the U.S. Environmental Protection Agency as notice of an off-permit change described as follows.

This change is allowed pursuant to WAC 173-401-724(1) as:

1. Change is not specifically addressed or prohibited by the permit terms and conditions
2. Change does not weaken the enforceability of the existing permit conditions
3. Change is not a Title I modification or a change subject to the acid rain requirements under Title IV of the FCAA
4. Change meets all applicable requirements and does not violate an existing permit term or condition
5. Change has complied with applicable preconstruction review requirements established pursuant to RCW 70.94.152.

Provide the following information pursuant to WAC-173-401-724(3):

**Description of the change:**

Radioactive Air Emissions NOC for Deactivation of the Plutonium Finishing Plant (PFP), DOE/RL-2003-43, revision per NOC Application/Permit Revision/AOP Off-Permit Change Notification DOE/RL-2003-43, Revision 0A is being submitted to the Washington State Department of Health (WDOH) for approval. A change in the Hanford Site Air Operating Permit is required to indicate this revised NOC.

**Date of Change:**

Effective date will be the approval by WDOH.

**Describe the emissions resulting from the change:**

Radioactive air emissions will not be affected by this change.

**Describe the new applicable requirements that will apply as a result of the change:**

Applicable requirements will be identified in approval notifications by WDOH.

**For Hanford Use Only:**

AOP Change Control Number:

Date Submitted: